

PLANT 2

ATTACHMENT A
AGRIUM KNO FACILITY
CONTINUOUS RELEASE-EMERGENCY RESPONSE NOTIFICATION SYSTEM REPORT

SECTION I: GENERAL INFORMATION

CR-ERNS Number: 44607

Date of Initial Release:

Date of Initial Call to NRC: 10/23/90

Type of Report: Indicate below the type of report you are submitting.

☐

Initial Written Notification

☐

First Anniversary

Follow-up
Report

☒

Written Notification

of a Change to
Initial Notification

☐

Written Notification

of a Change to
Follow-up Report

Signed Statement: I certify that the hazardous substances releases described herein are continuous and stable in quantity and rate under the definitions in 40 CFR 302.8(a) or 355.4(a)(2)(iii) and that all submitted information is accurate and current to the best of my knowledge.

8/13/99

Date

M. L. Nugent, Plant Manager

Name and Position

M. L. Nugent

Signature

Part A. Facility or Vessel Information

Name of Facility or Vessel

Alaska Nitrogen Products LLC
Kenai Plant

**Person
in Charge
of Facility
or Vessel**

Name of Person in Charge M. L. Nugent

Position Plant Manager

Telephone No. (907) 776-8121

Alternate Telephone No. () None

**Facility
Address or
Vessel
Port of
Registration**

Street Mile 21 Spur Highway

County Kenai Peninsula Borough

City Kenai

State AK

Zip Code 99611

Dun and Bradstreet Number for Facility

092876390

**Facility/Vessel
Location**

Latitude Deg N 60 Min 40 Sec 22

Longitude Deg W 151 Min 22 Sec 36

Vessel LORAN Coordinates

Part B. Population Information

**Population
Density**

Choose the range that describes the population density within a one-mile radius of your facility or vessel (Indicate by placing an "X" in the appropriate blank below.)

X 0 - 50 persons

101 - 500 persons

more than 1000 persons

51 - 100 persons

501 - 1000 persons

**Sensitive
Populations
and
Ecosystems
Within one
Mile Radius**

Sensitive Populations or Ecosystems
(e.g., schools, hospitals, wetlands, wildlife preserves, etc.)

NONE

Distance and direction from facility

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #2 Prill Tower, P-406

1. Indicate whether the release from this source is either:

continuous without interruption X OR routine, anticipated, intermittent

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Urea prill production.

Analysis?

3. Identify below how you established the pattern of release and calculated release estimates:

<u> X </u> Past release data	<u> </u> Knowledge of the facility/vessel's operations and release history	<u> X </u> Engineering estimate
<u> </u> AP-42 test	<u> </u> Best professional judgment	<u> </u> Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Name of Source: Plant #2 Prill Tower, P-406

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☐ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: 150 feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☐ **SURFACE WATER** (stream , lake , or other)

- If the release affects any **surface water body**, give the name of the water body.
- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**
- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☐ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- For a stack release to air, provide the following information, if available:
Inside diameter 8 ducts, ea. 5 feet or meters
Gas Exit Velocity 50 each feet/second or meters/seconds
Gas Temperature 85 degrees Fahrenheit, Kelvin, or Celsius

- For a release to surface water, provide the following information, if available:
Average Velocity feet/second of Surface Water

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number
44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #2 Prill Tower, P-406

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
		Upper Bound	Lower Bound			
Ammonia	7664-41-7	1,200	700	365	420,000	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)*		Normal Range of Mixture (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
				Upper Bound	Lower Bound	Upper Bound	Lower Bound			
N/A										

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate. *For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.*

Name of Source: Plant #2 Atmospheric Absorber, D-405

1. Indicate whether the release from this source is either:

continuous without interruption ☒ OR routine, anticipated, intermittent ☐

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Release could result if scrubber is taken down for maintenance during urea production. However, whenever possible, maintenance is performed during periods of plant shutdown.

3. Identify below how you established the pattern of release and calculated release estimates.

<input type="checkbox"/> Past release data	<input type="checkbox"/> Knowledge of the facility/vessel's operations and release history	<input checked="" type="checkbox"/> Engineering estimate
<input type="checkbox"/> AP-42 test	<input type="checkbox"/> Best professional judgment	<input type="checkbox"/> Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Name of Source: Plant #2 Atmospheric Absorber, D-405

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a waste pile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☐ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: 94 feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☐ **SURFACE WATER** (stream , lake , or other)

- If the release affects any **surface water body**, give the name of the water body.
- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**
- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☐ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- | | |
|---|--|
| <ul style="list-style-type: none">• For a stack release to air, provide the following information, if available:
Inside diameter <u>0.3</u> feet or meters
Gas Exit Velocity <u>Unknown</u> feet/second or meters/seconds
Gas Temperature <u>Unknown</u> degrees Fahrenheit, Kelvin, or Celsius | <ul style="list-style-type: none">• For a release to surface water, provide the following information, if available:
Average Velocity <u> </u> feet/second of Surface Water |
|---|--|

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source.
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #2 Atmospheric Absorber, D-405

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
		Upper Bound	Lower Bound			
Ammonia	7664-41-7	1,000	0	less than one	0	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)*		Normal Range of Mixture (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
				Upper Bound	Lower Bound	Upper Bound	Lower Bound			
N/A										

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #2 Tank Vent Scrubber, D-406

1. Indicate whether the release from this source is either:

continuous without interruption ☒ OR routine, anticipated, intermittent ☐

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Release could result if scrubber is taken down for maintenance during urea production. However, whenever possible, maintenance is performed during periods of plant shutdown.

Down only if instruments fail

3. Identify below how you established the pattern of release and calculated release estimates.

☐ Past release data ☐ Knowledge of the facility/vessel's operations and release history ☒ Engineering estimate
☐ AP-42 test ☐ Best professional judgment ☐ Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

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Name of Source: Plant #2 Tank Vent Scrubber, D-406

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a waste pile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☐ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: 33 feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☐ **SURFACE WATER** (stream , lake , or other)

- If the release affects any **surface water body**, give the name of the water body.
- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**
- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☐ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- | | |
|---|--|
| <ul style="list-style-type: none">• For a stack release to air, provide the following information, if available:
Inside diameter <u>1.5</u> feet or meters
Gas Exit Velocity <u>Unknown</u> feet/second or meters/seconds
Gas Temperature <u>100</u> degrees Fahrenheit, Kelvin, or Celsius | <ul style="list-style-type: none">• For a release to surface water, provide the following information, if available:
Average Velocity <u> </u> feet/second of Surface Water |
|---|--|

SECTION II: SOURCE INFORMATION (continued)

CR-ERNS Number

44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source:

Plant #2 Tank Vent Scrubber, D-406

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
		Upper Bound	Lower Bound			
Ammonia	7664-41-7	1,000	0	less than one	0	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	CASRN#	Weight Percentage		Normal Range of Components (in lbs. or kg per day)*		Normal Range of Mixture (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
			Upper Bound	Lower Bound	Upper Bound	Lower Bound					
N/A											

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #2 Crystallizer Hotwell, F-410

1. Indicate whether the release from this source is either:

continuous without interruption ☒ OR routine, anticipated, intermittent ☐

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Urea Prill Production

3. Identify below how you established the pattern of release and calculated release estimates.

☐ Past release data ☐ Knowledge of the facility/vessel's operations and release history ☒ Engineering estimate
☐ AP-42 test ☒ Best professional judgment ☐ Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Name of Source: Plant #2 Crystallizer Hotwell, F-410

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☐ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: 94 feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☐ **SURFACE WATER** (stream , lake , or other)

- If the release affects any **surface water body**, give the name of the water body.
- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**
- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☐ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- | | |
|---|--|
| <ul style="list-style-type: none">• For a stack release to air, provide the following information, if available:
Inside diameter <u>0.5</u> feet or meters
Gas Exit Velocity <u>Unknown</u> feet/second or meters/seconds
Gas Temperature <u>180</u> degrees Fahrenheit, Kelvin, or Celsius | <ul style="list-style-type: none">• For a release to surface water, provide the following information, if available:
Average Velocity <u> </u> feet/second of Surface Water |
|---|--|

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source:

Plant #2 Crystallizer Hotwell, F-410

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)* Upper Bound Lower Bound	Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
Ammonia	7664-41-7	10 1	365	1825	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	Weight Percentage	Normal Range of Components (in lbs. or kg per day)* Upper Bound Lower Bound	Normal Range of Mixture (in lbs. or kg per day)* Upper Bound Lower Bound	Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
N/A							

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #2 Urea Surge Tank, F-409

1. Indicate whether the release from this source is either:

continuous without interruption _____ OR routine, anticipated, intermittent X

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Urea solution is directed from the crystallizer to the surge tank when there is a back-end outage.

3. Identify below how you established the pattern of release and calculated release estimates.

_____ Past release data	_____ Knowledge of the facility/vessel's operations and release history	_____ Engineering estimate
_____ AP-42 test	<u> X </u> Best professional judgment	_____ Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION
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CR-ERNS Number

44607

Name of Source: Plant #2 Urea Surge Tank, F-409

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☐ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: 94 feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☐ **SURFACE WATER** (stream , lake , or other)

- If the release affects any **surface water body**, give the name of the water body.
- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**
- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☐ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- For a stack release to air, provide the following information, if available:
Inside diameter 0.83 feet or meters
Gas Exit Velocity 1 feet/second or meters/seconds
Gas Temperature 50 degrees Fahrenheit, Kelvin, or Celsius

- For a release to surface water, provide the following information, if available:
Average Velocity feet/second of Surface Water

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number
44607

Part C. Identify and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #2 Urea Surge Tank, F-409

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)* Upper Bound Lower Bound	Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
Ammonia	7664-41-7	8 0	Approx. 10	80	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)* Upper Bound Lower Bound	Normal Range of Mixture (in lbs. or kg per day)* Upper Bound Lower Bound	Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
N/A							

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #2 Vent Scrubber, D-407

1. Indicate whether the release from this source is either:

continuous without interruption X OR routine, anticipated, intermittent

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Urea prill production.

Lab Analyzes H₂O every 2 weeks
pressure increases of ~~2.5~~ 0.5 psi
will trigger vapors to go to stack
Not 100% efficient

what would release be
if taken down for repair?

3. Identify below how you established the pattern of release and calculated release estimates.

<u> X </u> Past release data	<u> </u> Knowledge of the facility/vessel's operations and release history	<u> </u> Engineering estimate
<u> </u> AP-42 test	<u> </u> Best professional judgment	<u> </u> Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Name of Source: Plant #2 Vent Scrubber, D-407

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☐ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: 70 feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☐ **SURFACE WATER** (stream , lake , or other)

- If the release affects any **surface water body**, give the name of the water body.
- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**
- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☐ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- For a stack release to air, provide the following information, if available:
Inside diameter 8 feet or meters
Gas Exit Velocity Unknown feet/second or meters/seconds
Gas Temperature 180-220 degrees Fahrenheit, Kelvin, or Celsius

- For a release to surface water, provide the following information, if available:
Average Velocity feet/second of Surface Water

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #2 Vent Scrubber, D-407

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
		Upper Bound	Lower Bound			
Ammonia	7664-41-7	180	0	365	7,700	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	Weight Percentage	Normal Range of Components (in lbs. or kg per day)*		Normal Range of Mixture (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
			Upper Bound	Lower Bound	Upper Bound	Lower Bound			
N/A									

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #2 Vent Scrubber, D-408

1. Indicate whether the release from this source is either:

continuous without interruption X OR routine, anticipated, intermittent

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Urea prill production.

*sampled every 2 weeks
not 100% efficient*

*Release amt if
down for repair?*

3. Identify below how you established the pattern of release and calculated release estimates.

<u> </u> Past release data	<u> </u> Knowledge of the facility/vessel's operations and release history	<u> X </u> Engineering estimate
<u> </u> AP-42 test	<u> </u> Best professional judgment	<u> </u> Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

- For a release to surface water, provide the following information, if available:
Average Velocity _____ feet/second
of Surface Water

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number
44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #2 Vent Scrubber, D-408

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
		Upper Bound	Lower Bound			
Ammonia	7664-41-7	100	0	365	30	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)*		Normal Range of Mixture (in lbs. or kg per day)*		Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
				Upper Bound	Lower Bound	Upper Bound	Lower Bound			
N/A										

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant 2 Cooling Tower, E-611

1. Indicate whether the release from this source is either:

continuous without interruption _____ OR routine, anticipated, intermittent X

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Release occurs during Process Condensate Stripper outages, which occur approximately once every 4 years during turnarounds. During outages, the process condensate is directed to either the Plant 2 or the Plant 5 cooling tower.

3. Identify below how you established the pattern of release and calculated release estimates.

<u> </u> Past release data	<u> </u> Knowledge of the facility/vessel's operations and release history	<u> X </u> Engineering estimate
<u> </u> AP-42 test	<u> </u> Best professional judgment	<u> </u> Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

44607

- For a release to surface water, provide the following information, if available:
Average Velocity _____ feet/second of Surface Water

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number
44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant 2 Cooling Tower, E-611

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)* Upper Bound Lower Bound	Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
Ammonia	7664-41-7	6,200 0	3 days every 4 years	18,600 (occurs once every 4 years)	Whenever Stripper is out of service for maintenance. Does not correspond to a particular month.

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance Components	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)* Upper Bound Lower Bound	Normal Range of Mixture (in lbs. or kg per day)* Upper Bound Lower Bound	Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
N/A							

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #1 & #2 Vent / Flare Stack, B-402

1. Indicate whether the release from this source is either:

continuous without interruption X OR routine, anticipated, intermittent xl

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Ammonia and urea production.

upper bound is when flare is taken
down for service
plant would have to be shut down
to avoid release.

3. Identify below how you established the pattern of release and calculated release estimates.

<u>X</u> Past release data	_____ Knowledge of the facility/vessel's operations and release history	<u>X</u> Engineering estimate
_____ AP-42 test	_____ Best professional judgment	_____ Other (explain)

* Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Name of Source: Plant #1 & #2 Vent / Flare Stack, B-402

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☐ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: 200 feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☐ **SURFACE WATER** (stream , lake , or other)

- If the release affects any **surface water body**, give the name of the water body.
- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**
- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☐ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- For a stack release to air, provide the following information, if available:
Inside diameter 1.3 feet or meters
Gas Exit Velocity unknown feet/second or meters/seconds
Gas Temperature 100 degrees Fahrenheit, Kelvin, or Celsius

- For a release to surface water, provide the following information, if available:
Average Velocity feet/second of Surface Water

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number
44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #1 & #2 Vent / Flare Stack, B-402

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Upper Bound (in lbs. or kg per day)*	Normal Range (in lbs. or kg per day)*	Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
Ammonia	7664-41-7	4700	6	365	32,000 *	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)*	Normal Range of Mixture (in lbs. or kg per day)*	Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
N/A			Upper Bound Lower Bound	Upper Bound Lower Bound			

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.
* Flare is down for maintenance as much as 5 days per year. $5 \times 4700 + 360 \times 24 = 32,000$

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number

44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #1 & #2 Emergency Flare, B-403

1. Indicate whether the release from this source is either:

continuous without interruption _____ OR routine, anticipated, intermittent X

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Ammonia and urea production.

Backflow valve

3. Identify below how you established the pattern of release and calculated release estimates.

X Past release data _____ Knowledge of the facility/vessel's operations and release history X Engineering estimate
_____ AP-42 test _____ Best professional judgment _____ Other (explain)

* Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number

44607

Name of Source: Plant #1 & #2 Emergency Flare, B-403

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☐ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: 200 feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☐ **SURFACE WATER** (stream , lake , or other)

- If the release affects any **surface water body**, give the name of the water body.
- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**
- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☐ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- | | |
|---|--|
| <ul style="list-style-type: none">• For a stack release to air, provide the following information, if available:
Inside diameter <u>5</u> feet or meters
Gas Exit Velocity <u>unknown</u> feet/second or meters/seconds
Gas Temperature <u>100</u> degrees Fahrenheit, Kelvin, or Celsius | <ul style="list-style-type: none">• For a release to surface water, provide the following information, if available:
Average Velocity <u> </u> feet/second of Surface Water |
|---|--|

SECTION II: SOURCE INFORMATION
(continued)

CR-ERNS Number
44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source
Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #1 & #2 Emergency Flare, B-403

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)* Upper Bound Lower Bound	Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
Ammonia	7664-41-7	700 0	365	44,000	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)*		Mixture Upper Bound Lower Bound	Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
				Upper Bound	Lower Bound				
N/A									

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

